

Are New Norms Needed for Static-99?

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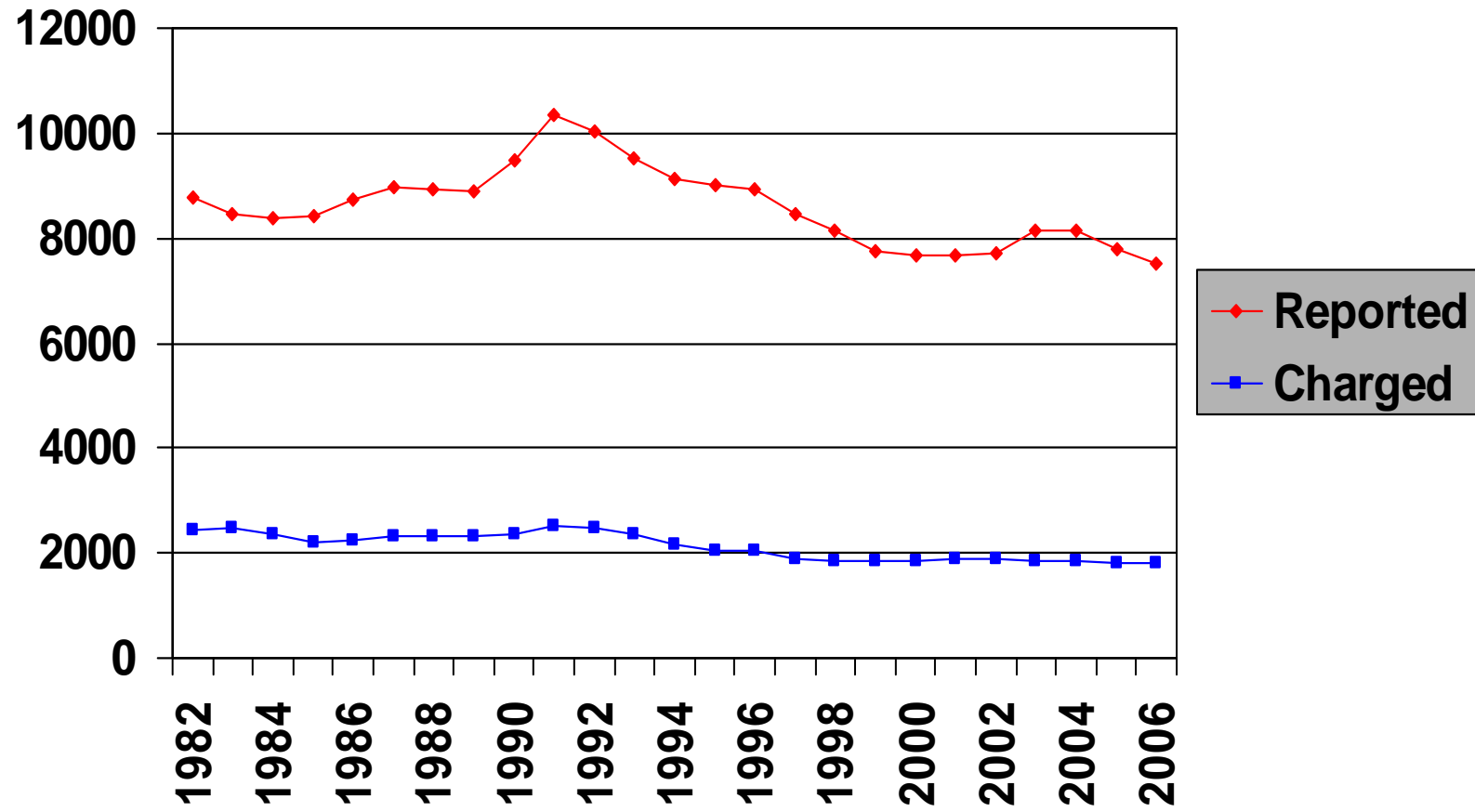
R. Karl Hanson

David Thornton

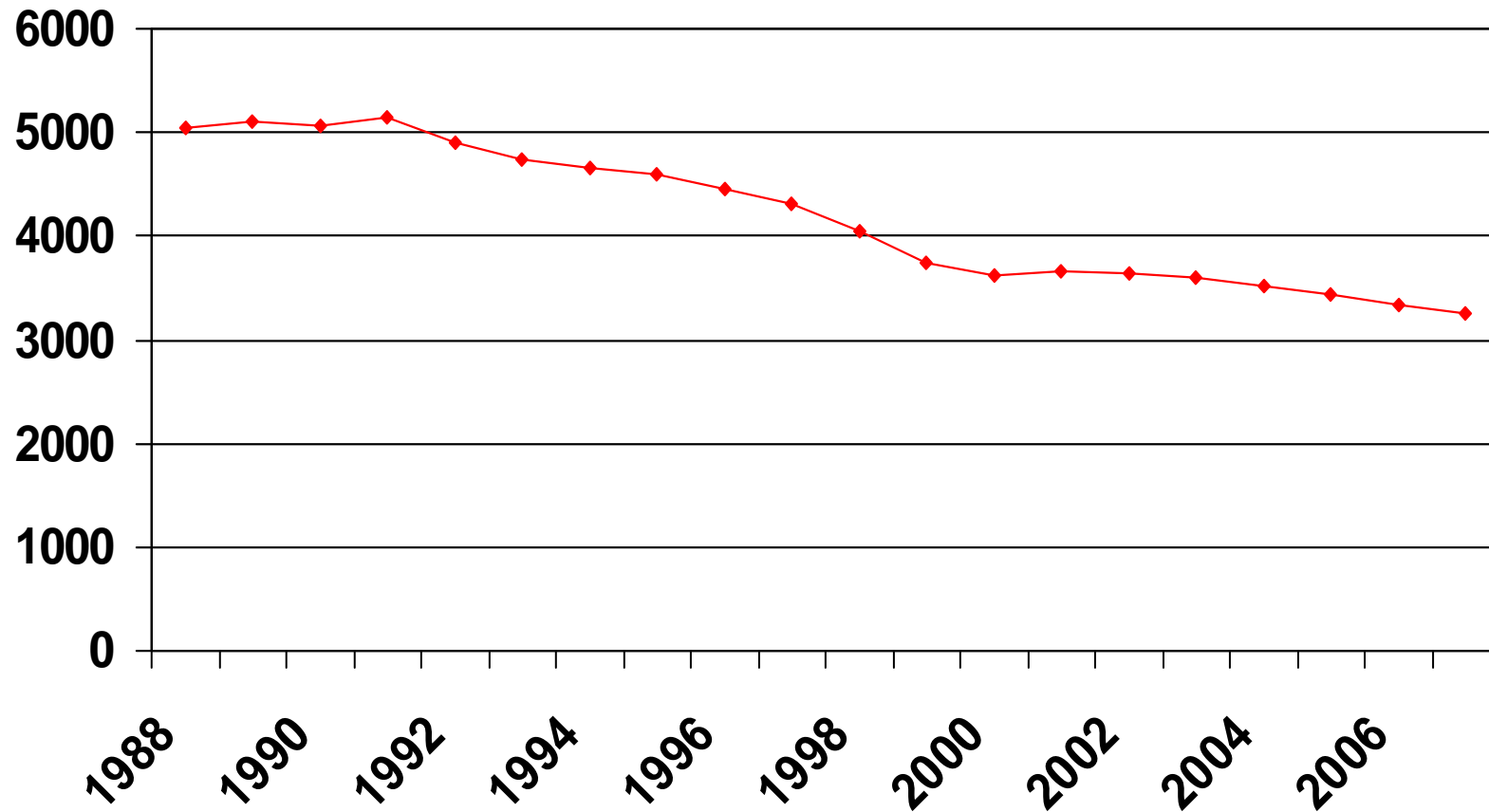
Presented at the 27th Annual Research and Treatment Conference
of the Association for the Treatment of Sexual Abusers,

Atlanta, Georgia, October 23, 2008

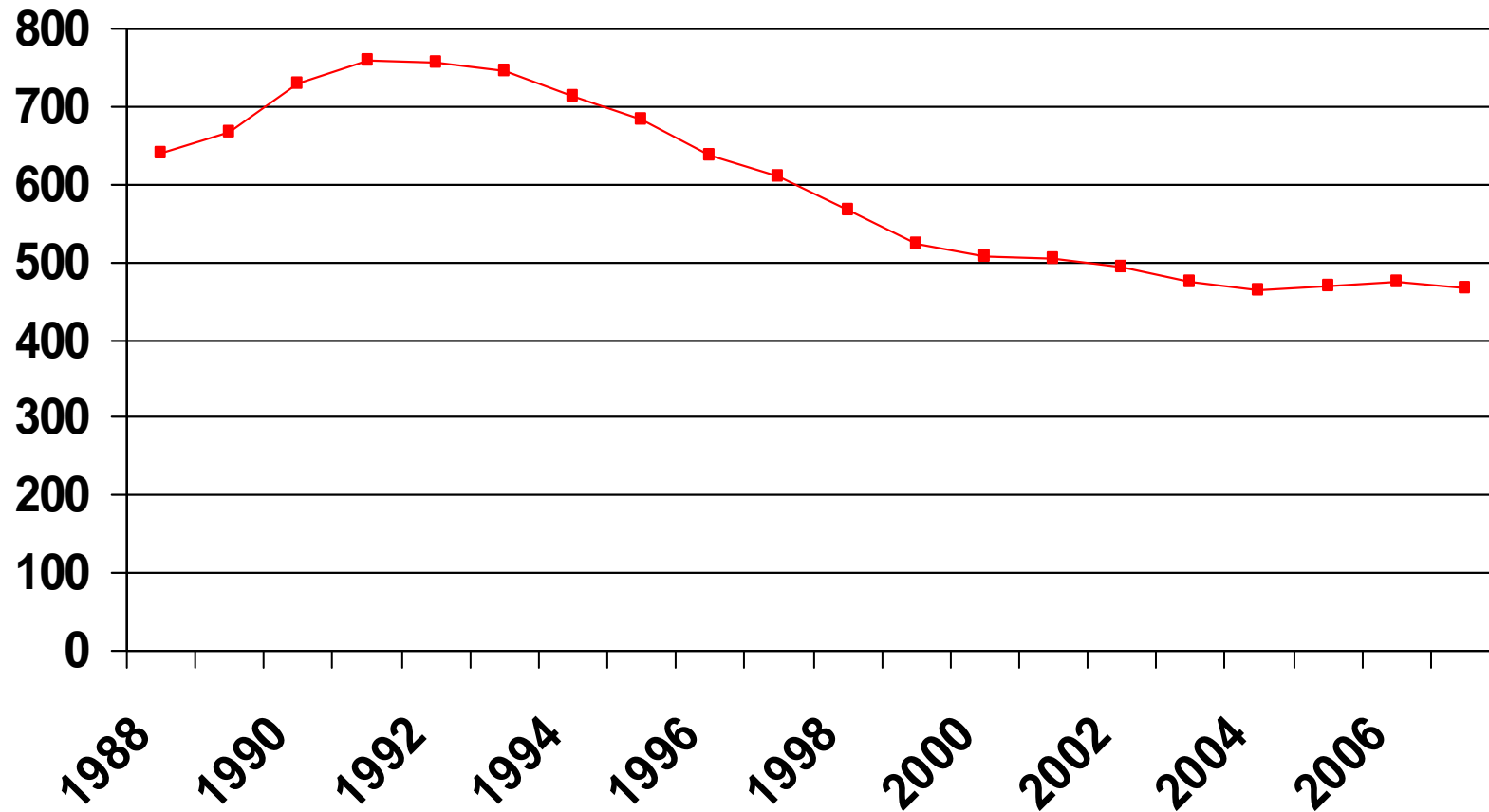
Crimes Rates in Canada



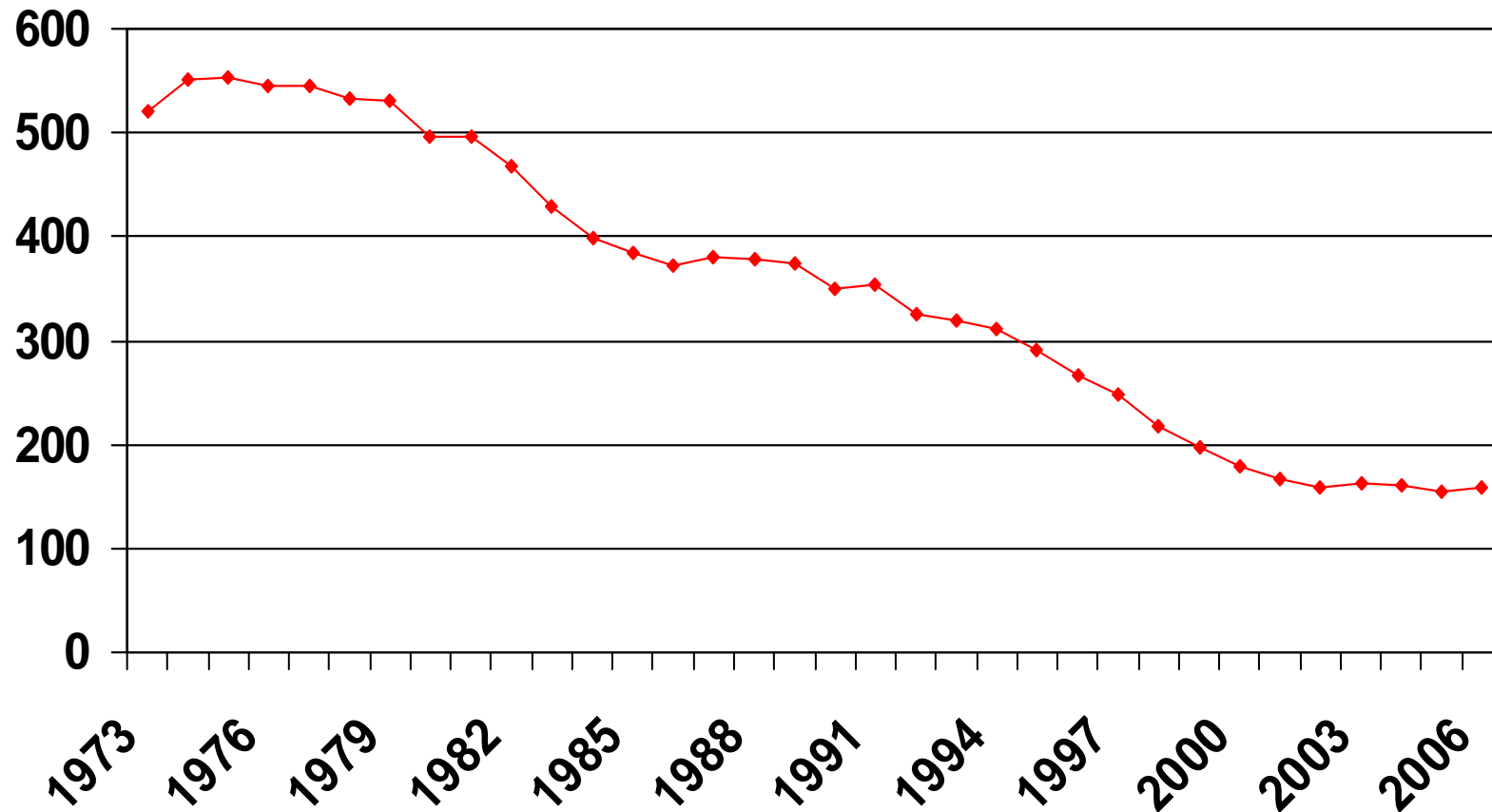
Property Crimes Rates in U.S.: Uniform Crime Reports



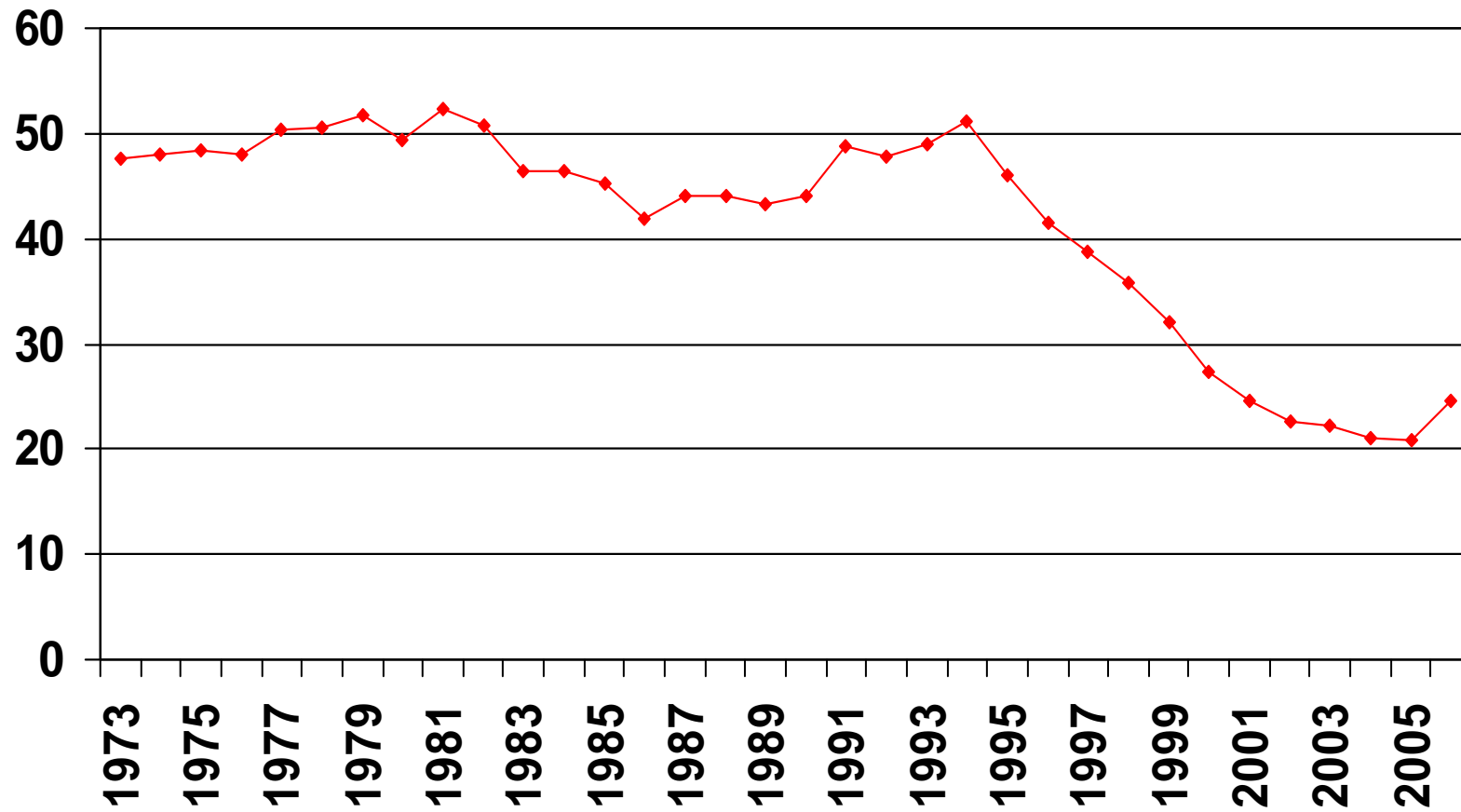
Violent Crimes Rates in U.S.: Uniform Crime Reports



Victimization Rates in U.S.: Property



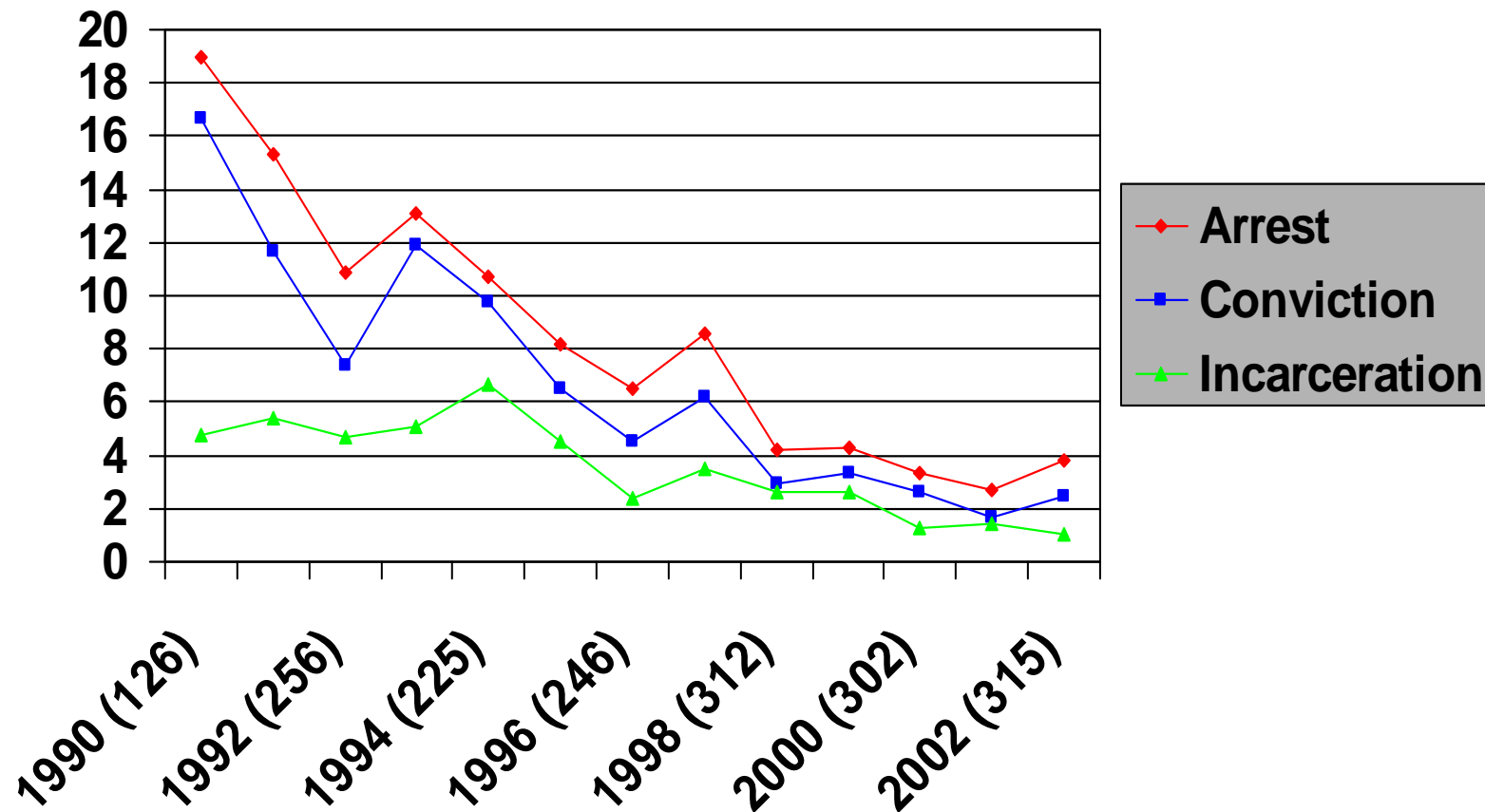
Victimization Rates in U.S.: Violent



Child Sexual Abuse

- 1990-2004, sexual abuse substantiations down 49% (Finkelhor & Jones, 2006)
- At least two self-report victimization surveys with children show decreases in sexual victimization in the 1990s (Jones & Finkelhor, 2003)

Minnesota Dept of Corrections (2007) Three-Year Sexual Recidivism Rates



Are the Original Static-99
Recidivism Estimates
Still Valid???

Static-99

- Actuarial
- Designed to predict sexual and violent recidivism in adult male sexual offenders
- Includes sexual and violent recidivism estimates (5, 10, 15 years)
- Most widely used in Canada and US
 - Archer et al., 2006; Interstate Commission for Adult Offender Supervision, 2007; Jackson & Hess, 2007; McGrath, Cumming, & Burchard, 2003

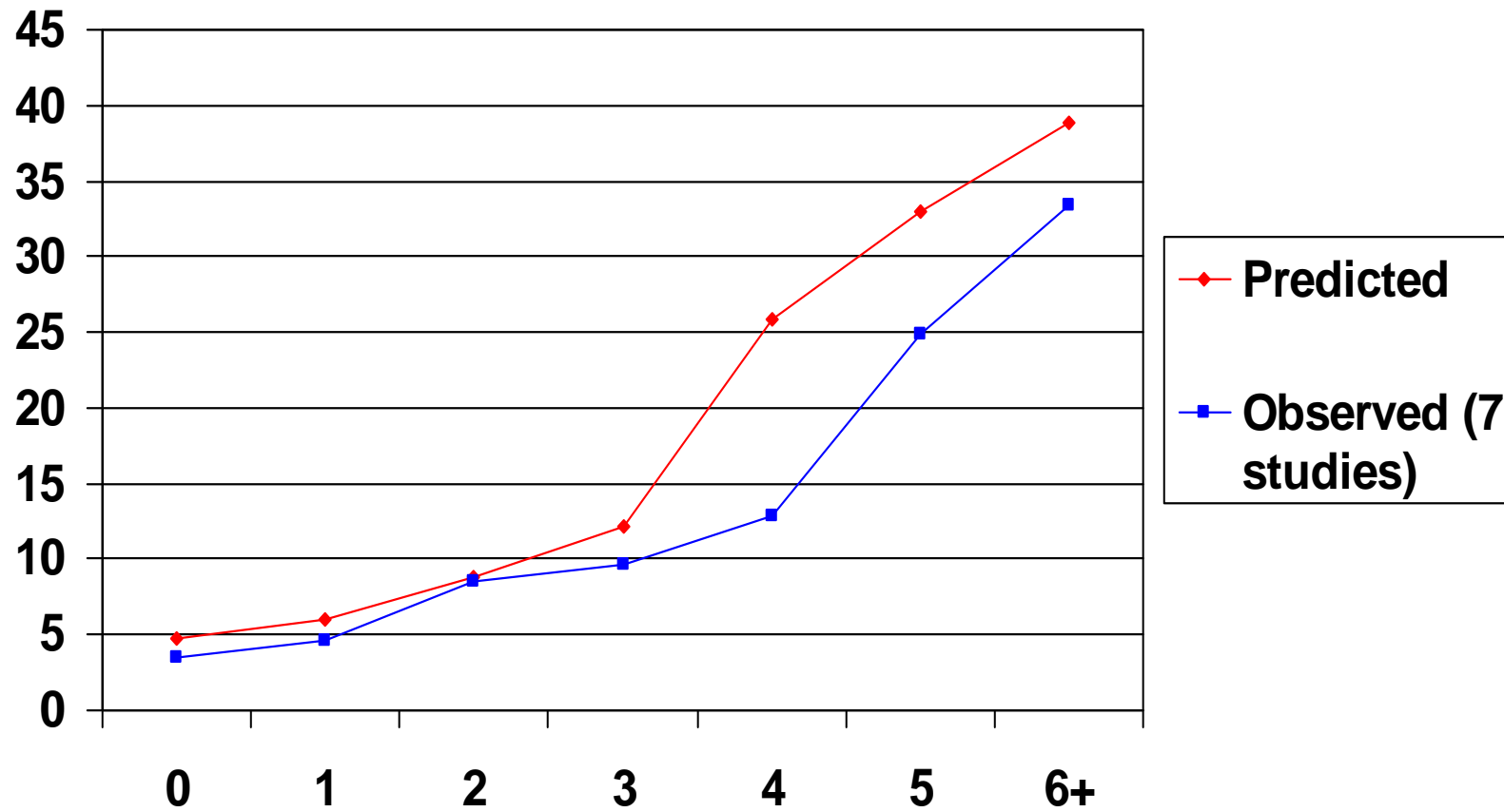
Static-99: Replications

- Most researched instrument for sex offenders (Hanson & Morton-Bourgon, 2007; Hanson & Morton-Bourgon, in press)
- Moderate predictive accuracy: ROC = .68; $d = .67$
- 63 replications
 - RRASOR has 34 replications, all other sex offender tools have ≤ 12

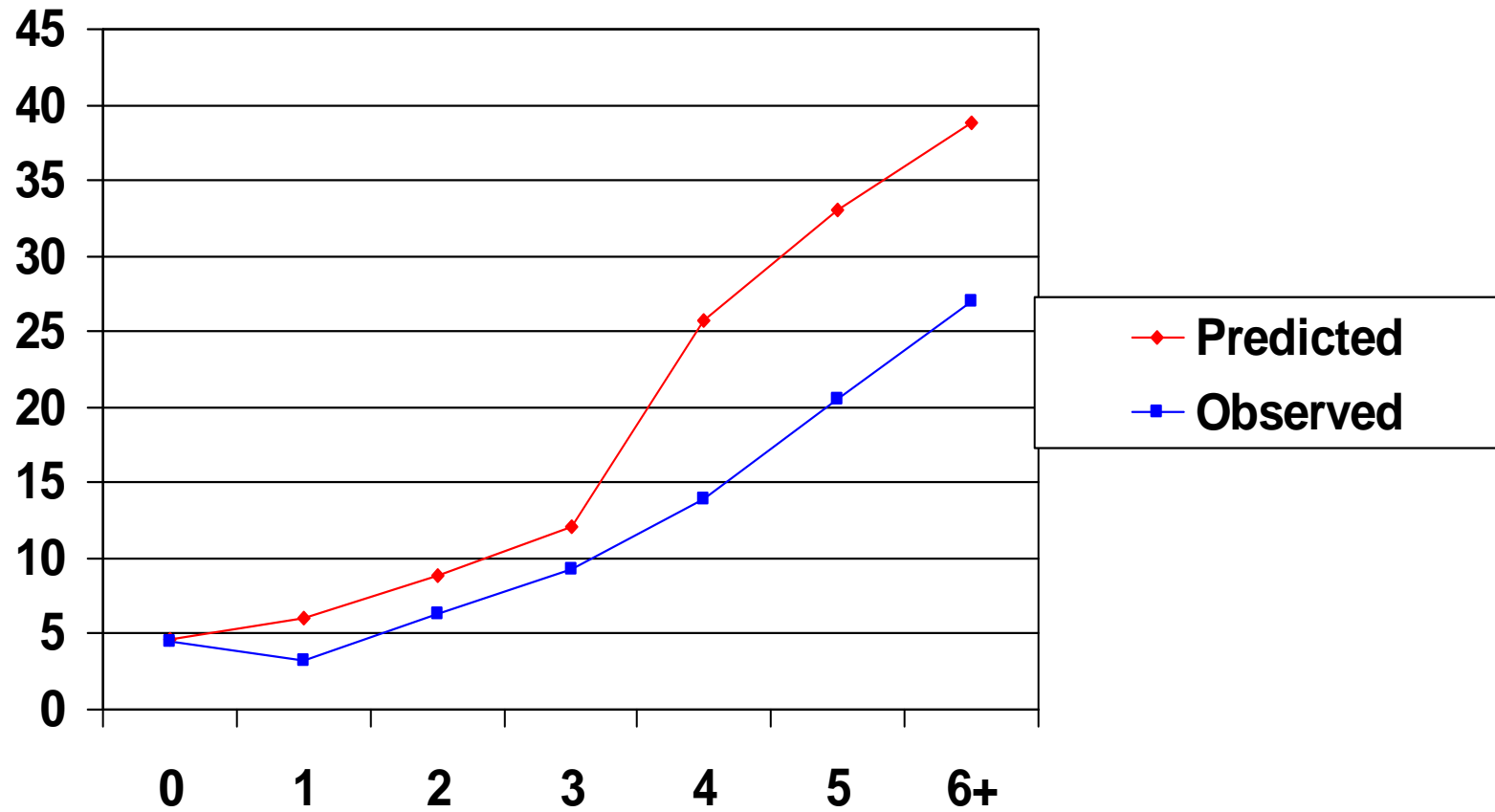
Stability of Static-99 Recidivism Rates

- Doren (2004)
 - 5 years; 7 studies
- Helmus (2007/2008)
 - 5 & 10 years; 8 samples, $n = 3,034$

STATIC-99 5-year Sexual Recidivism Rates (Doren, 2004)



STATIC-99 5-year Sexual Recidivism Rates (Helmus et al., 2007/2008)



The Present Project

- Collected datasets with Static-99 scores and recidivism information
- 26 datasets (so far!)
 - All 8 included in Helmus (2008)
 - Four from Doren (2004)
- 18 datasets have been transformed, cleaned, and merged
 - 1 dataset has violent recidivism only (not sexual)

Studies included

(*cleaned and merged so far)

*Allan et al. (2007) [Kia
Marama]

*Bartosh et al. (2003)

*Bengtson & Långström (2007)

*Bigras (2007)

*Boer (2003)

*Bonta & Yessine (2005)

*Cortoni & Nunes (2007)

Craig et al. (2006)

Craissati et al. (2008)

*de Vogel et al. (2008)

*Eher et al. (2008)

Endrass et al. (in press)

*Epperson (2003)

Studies included

(*cleaned and merged so far)

*Haag (2005)

*Långström (2004)

*Hanson et al. (2007)

*Langton (2003)

*Harkins & Beech (2007)

*Saum (2007)

*Harris et al. (2003)

Wilson, Cortoni, & Vermani
(2007)

Hill et al. (2008)

Wilson, Picheca, & Prinzo
(2007)

Johansen (2007)

*Knight & Thornton (2007)

Wilson, Leaver, & Whealy
(2007)

Descriptives of 18 Samples

- Country:
 - 8 Canadian ($n = 2,271$)
 - 4 continental Europe ($n = 2,416$)
 - 4 U.S. ($n = 1,028$)
 - 1 New Zealand ($n = 493$)
 - 1 U.K. ($n = 198$)
- Offender Type ($n = 4,953$, Info on 10 samples):
 - 53% Child Molester
 - 38% Rapist
 - 5% Other (e.g., exhibitionist, voyeur)
 - 4% Mixed
- Year of Release ($n = 6,114$, Info on 16 samples):
 - 90% released in 1990 or later

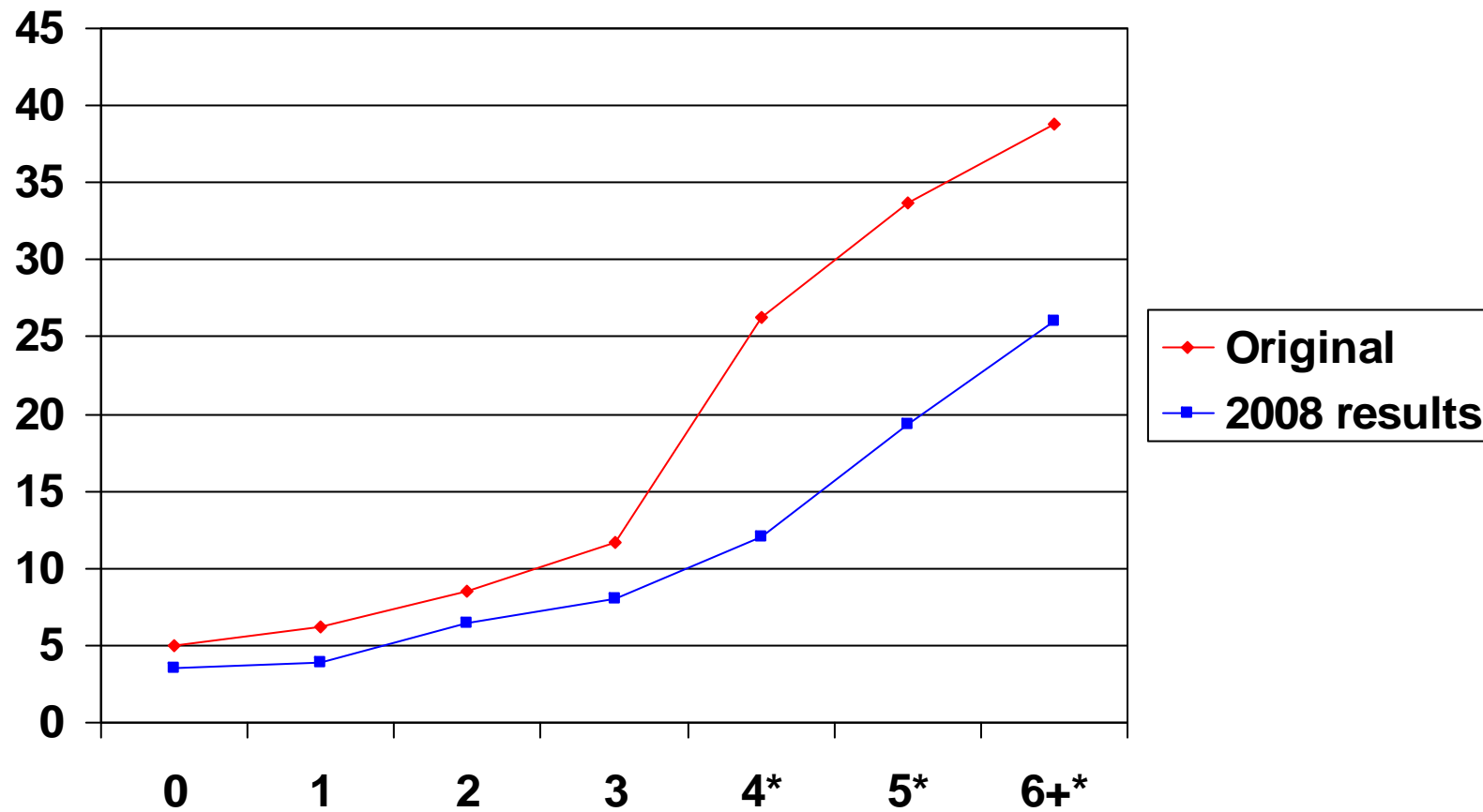
Descriptives of 18 samples

- Recidivism Criteria
 - 10 samples used charges ($n = 3,462$); 8 convictions ($n = 3,312$)
- Location (Info on 16 samples)
 - 15 samples from institutions ($n = 5,590$)
 - 3 samples had some community-only offenders ($n = 483$)
- Sample Type (Info on 12 samples)
 - 6 samples pre-selected to be high risk ($n = 1,562$)
 - 5 samples of routine CSC cases ($n = 1,249$)
 - 2 samples with low-risk community cases ($n = 477$)
- Treatment Status by sample (Info on 9 samples)
 - 6 samples mostly treated (75%+, $n = 1,414$)
 - 3 samples mixed (25%-75%, $n = 843$)
 - 0 samples mostly untreated (<25% treated)

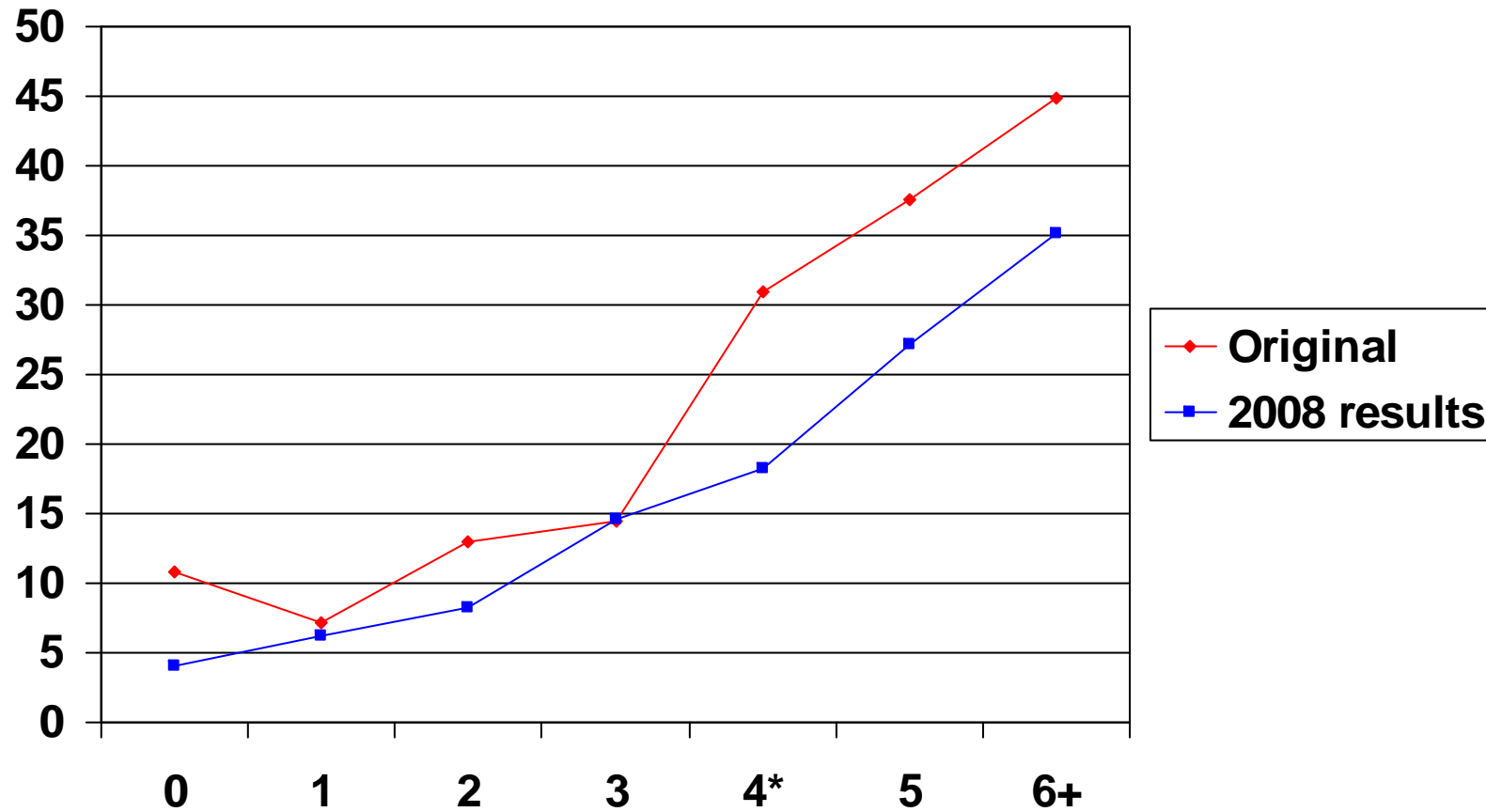
Descriptives of 18 samples: Recidivism Info

- Survival Analysis & Cox Regression
 - Sexual Recidivism ($k = 17, n = 6,406$)
 - Violent Recidivism ($k = 14, n = 6,098$)
- Fixed Follow-Up & Logistic Regression
 - 5-year Sexual Recidivism ($k = 17, n = 4,291$)
 - 10-year Sexual Recidivism ($k = 10, n = 1,621$)
 - 5-year Violent Recidivism ($k = 14, n = 3,929$)
 - 10-year Violent Recidivism ($k = 9, n = 1,642$)

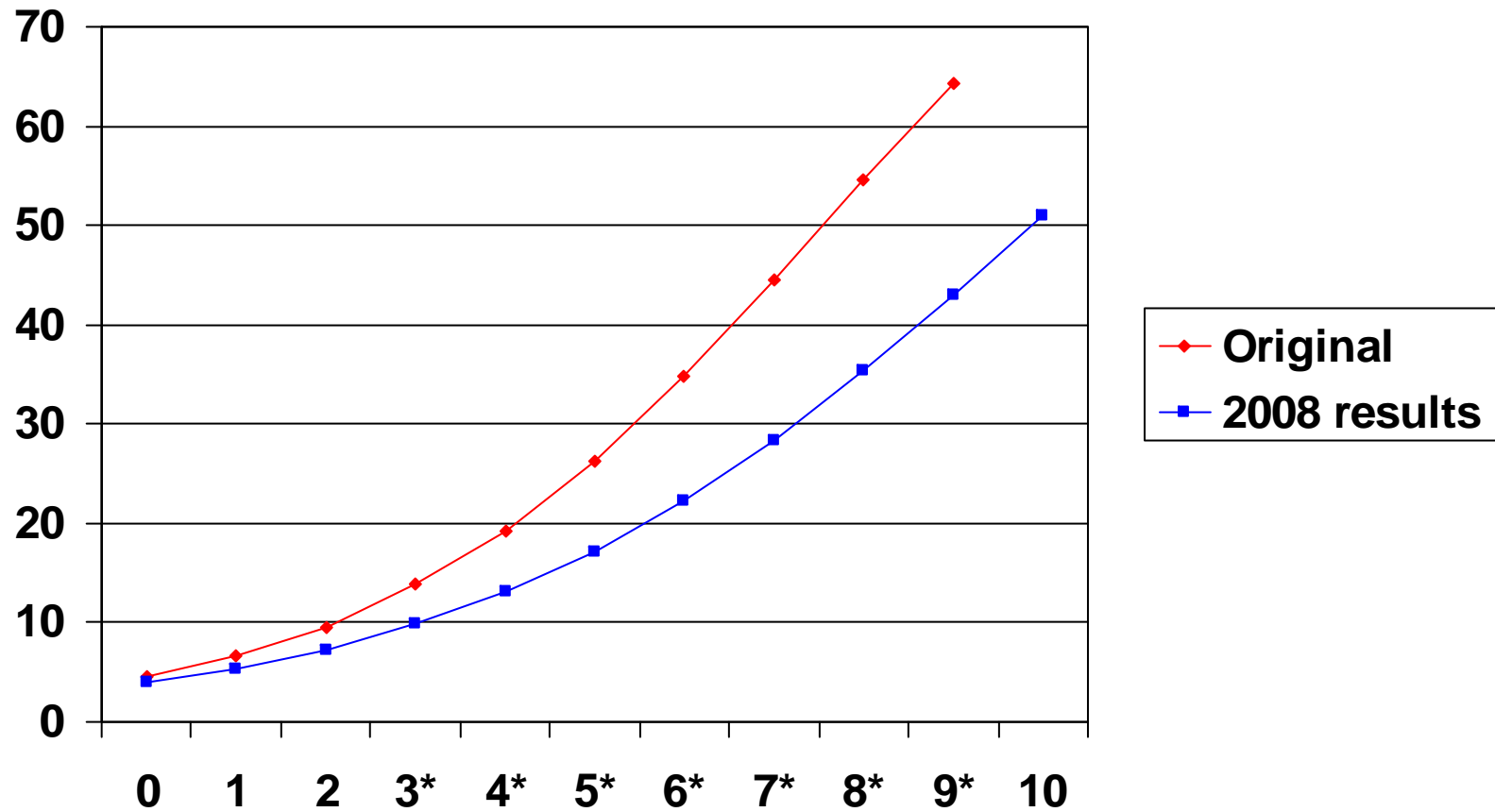
New Recidivism Rates: 5-year Sexual Survival Analysis, initial $n = 6,406$



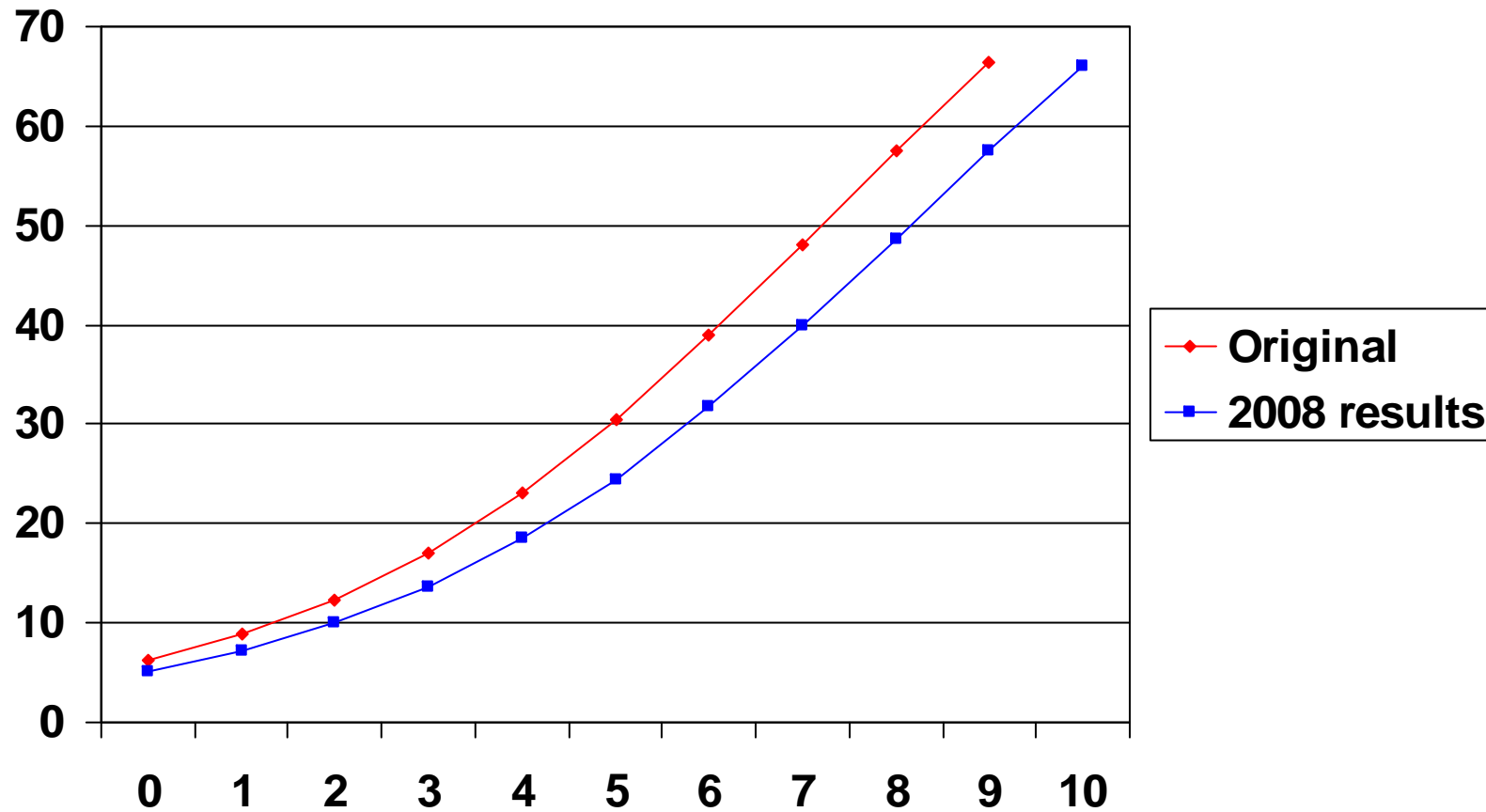
New Recidivism Rates: 10-year Sexual Survival Analysis, initial $n = 6,406$



New 5-Year Sexual Recidivism Rates: Logistic Regression, $n = 4,291$

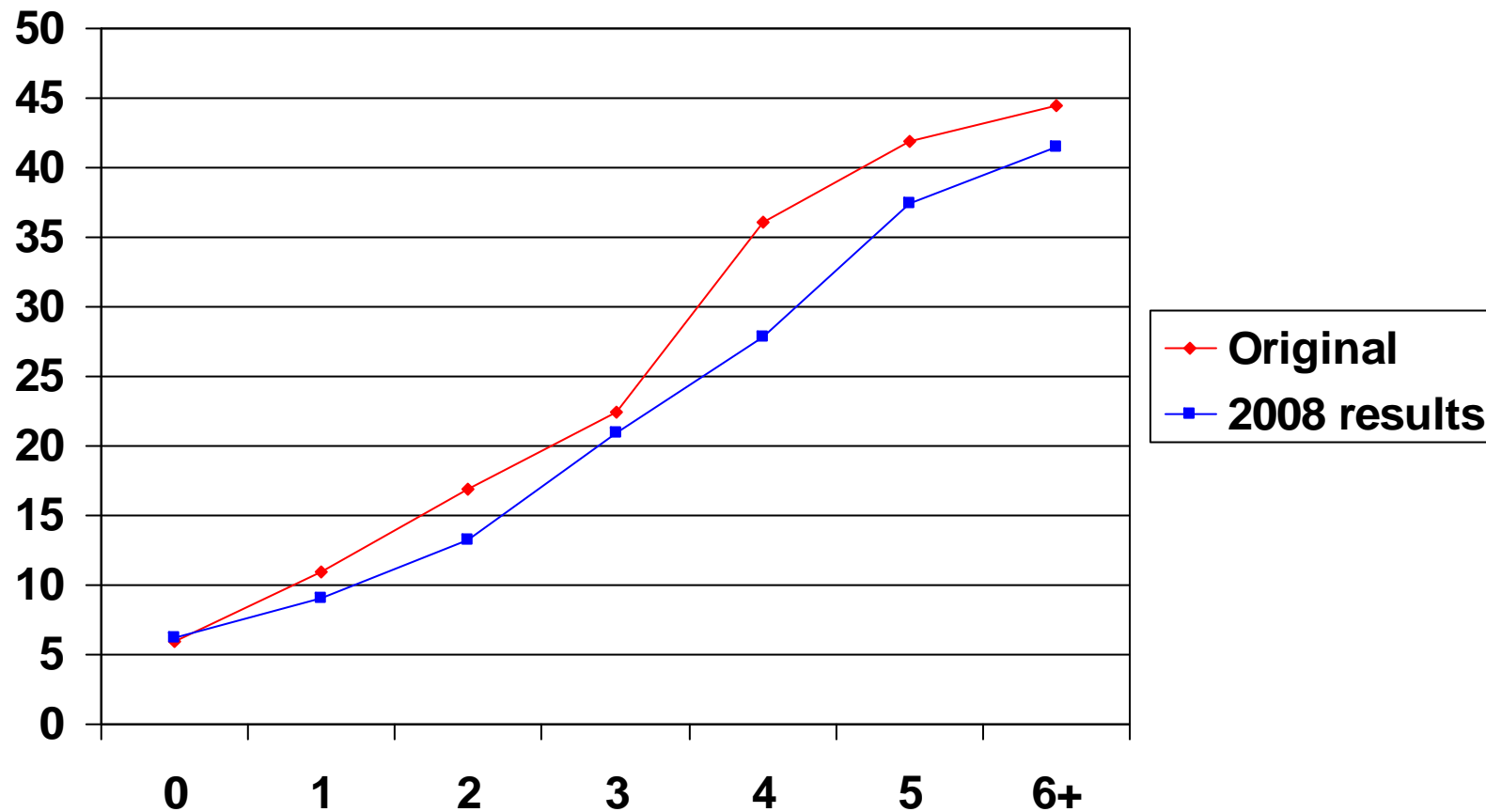


10 Year Sexual Recidivism Rates: Logistic Regression, $n = 1,621$

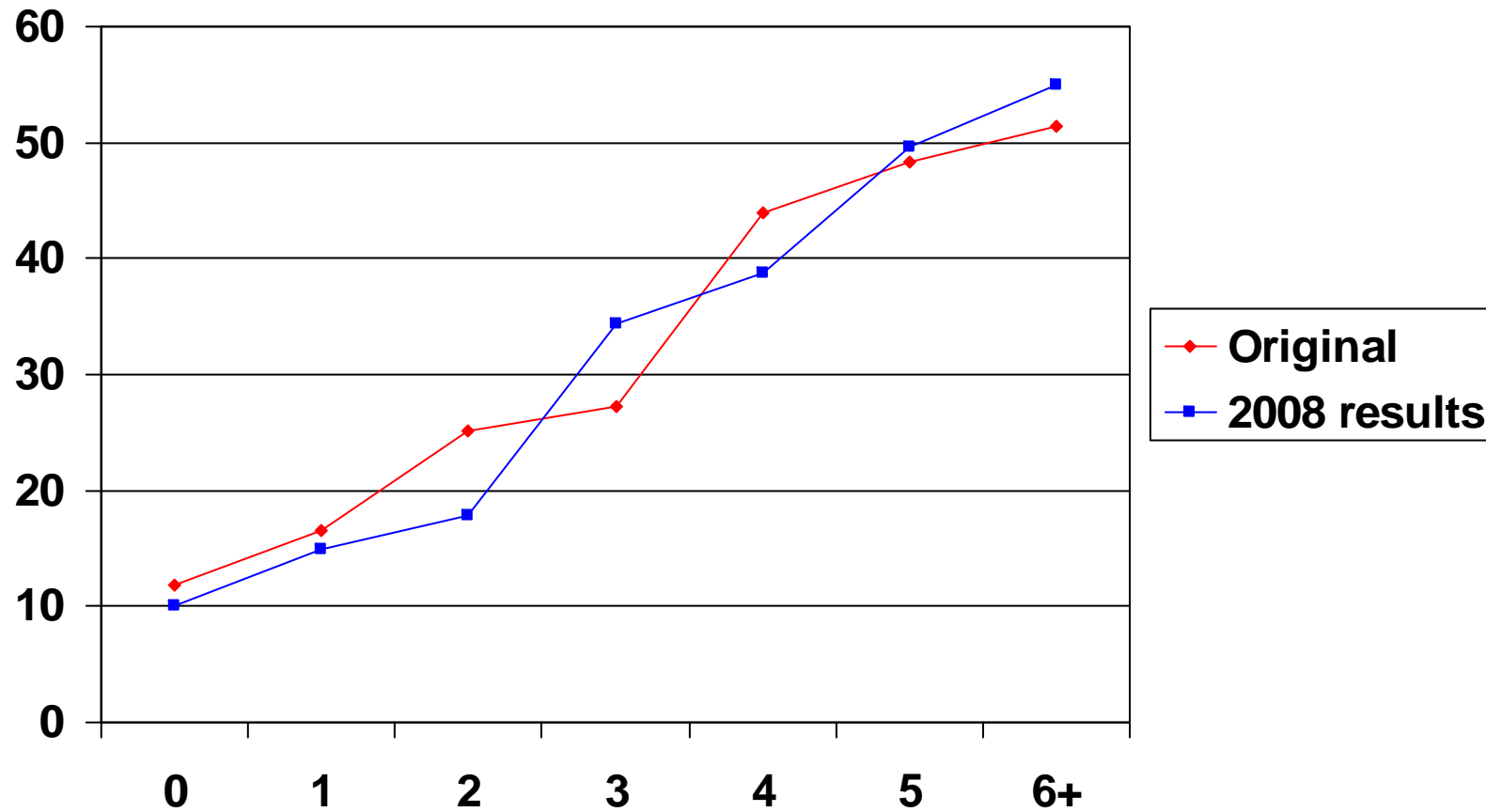


New 5 Year Violent Recidivism Rates

Survival Analysis, initial $n = 6,096$



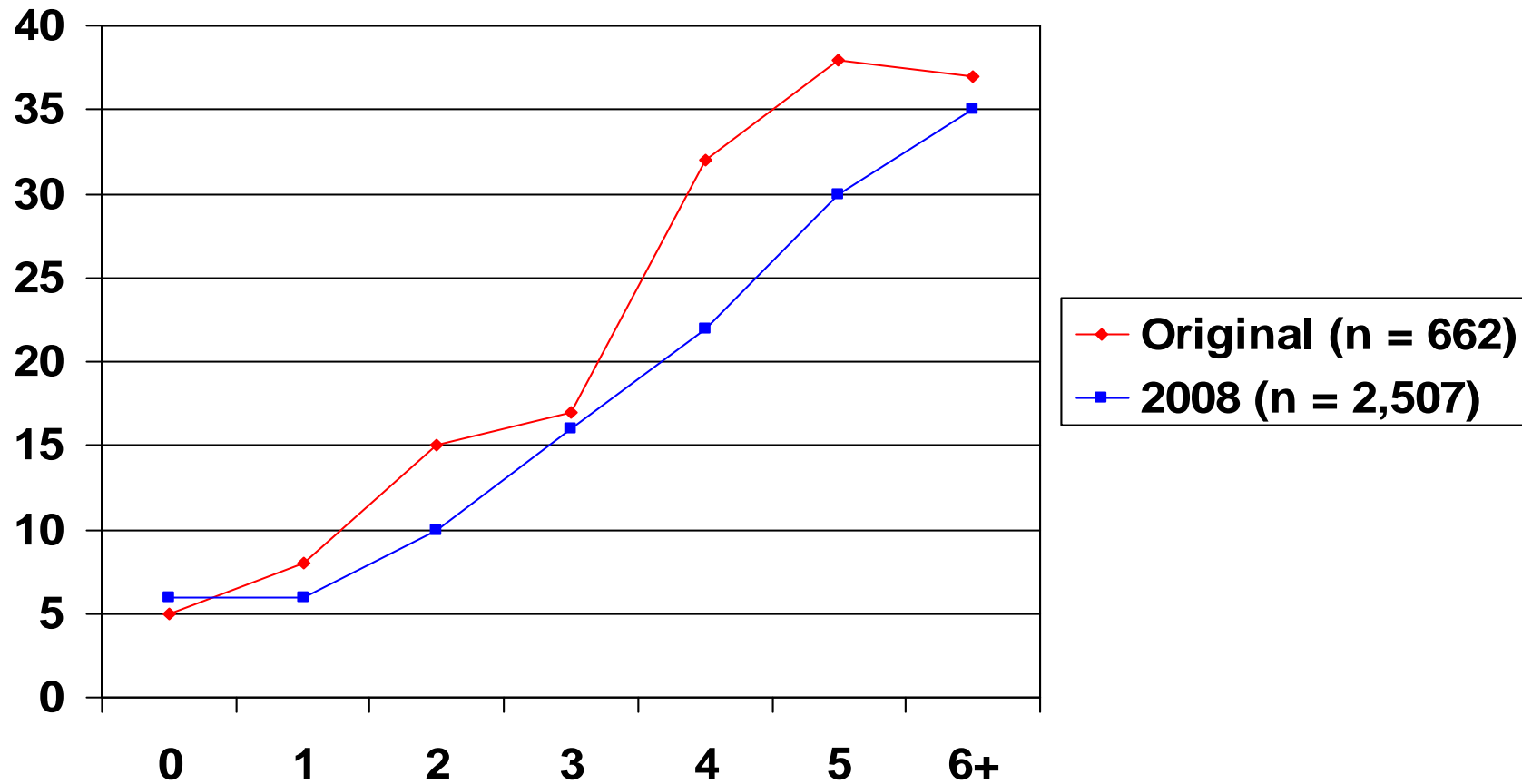
10 Year Violent Recidivism Rates: Survival Analysis, initial $n = 6,096$



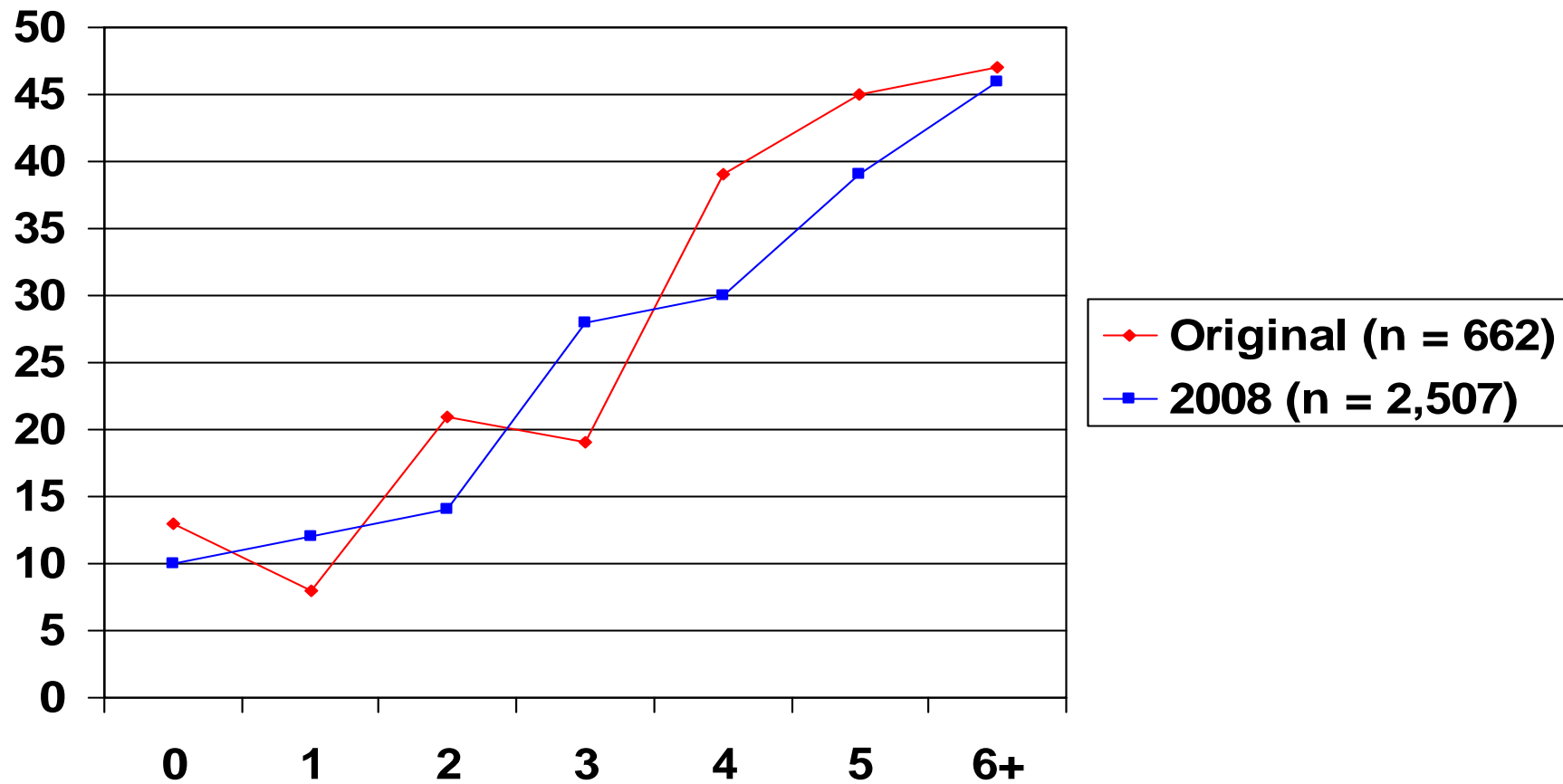
Did Violent Recidivism Rates Decrease?

- Overall: do not appear lower than original
- Possibilities:
 - Sexual recidivism declined but violent did not (unlikely)
 - Both declined, but moderators are suppressing differences
 - Most likely: More rapists (37%) than original (28%)
- Let's look a little closer.....

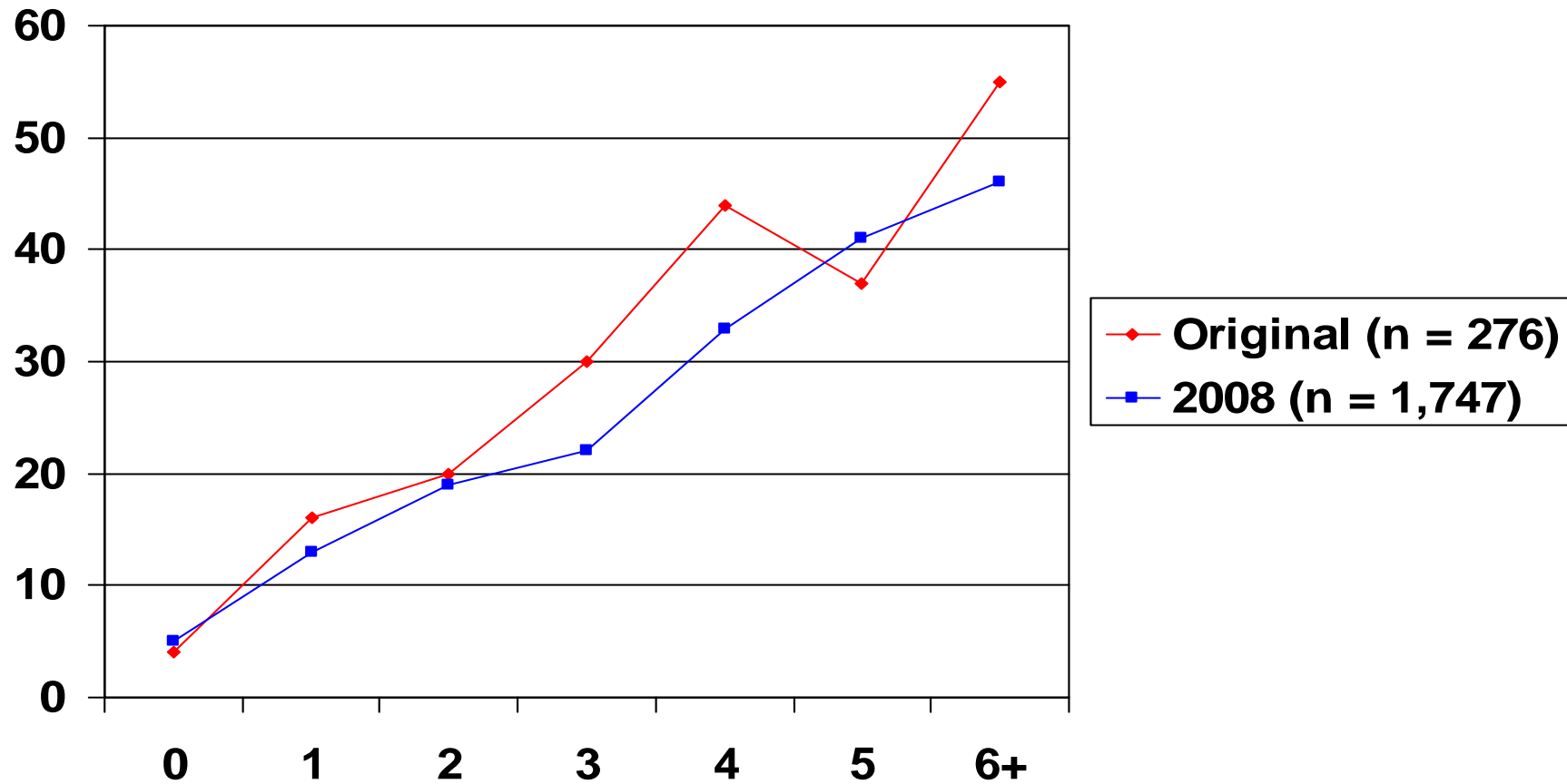
5 Year Violent Recidivism: Child Molesters (Survival Analysis)



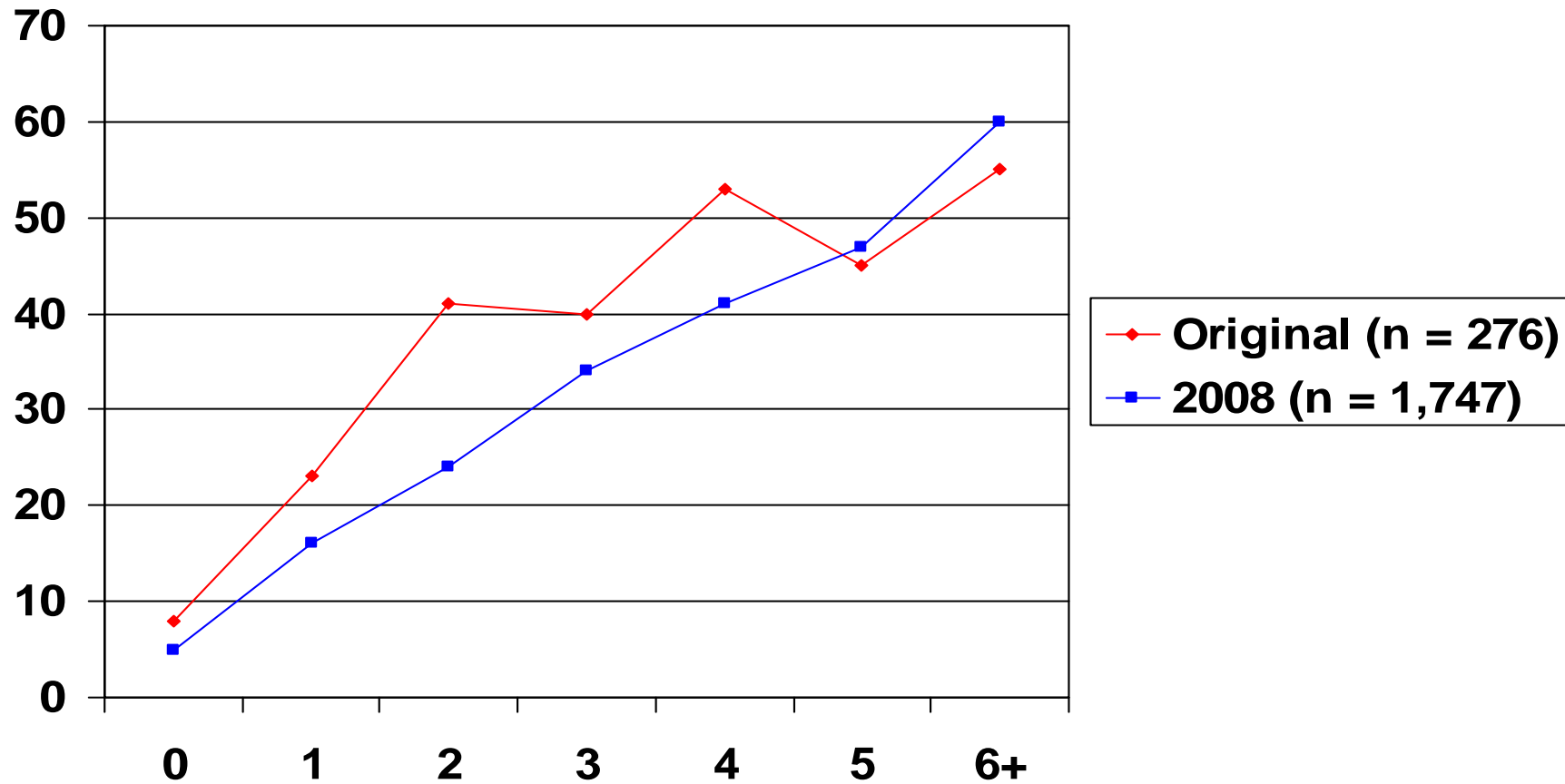
10 Year Violent Recidivism: Child Molesters (Survival Analysis)



5 Year Violent Recidivism Rates: Rapists (Survival Analysis)



10 Year Violent Recidivism: Rapists (Survival Analysis)

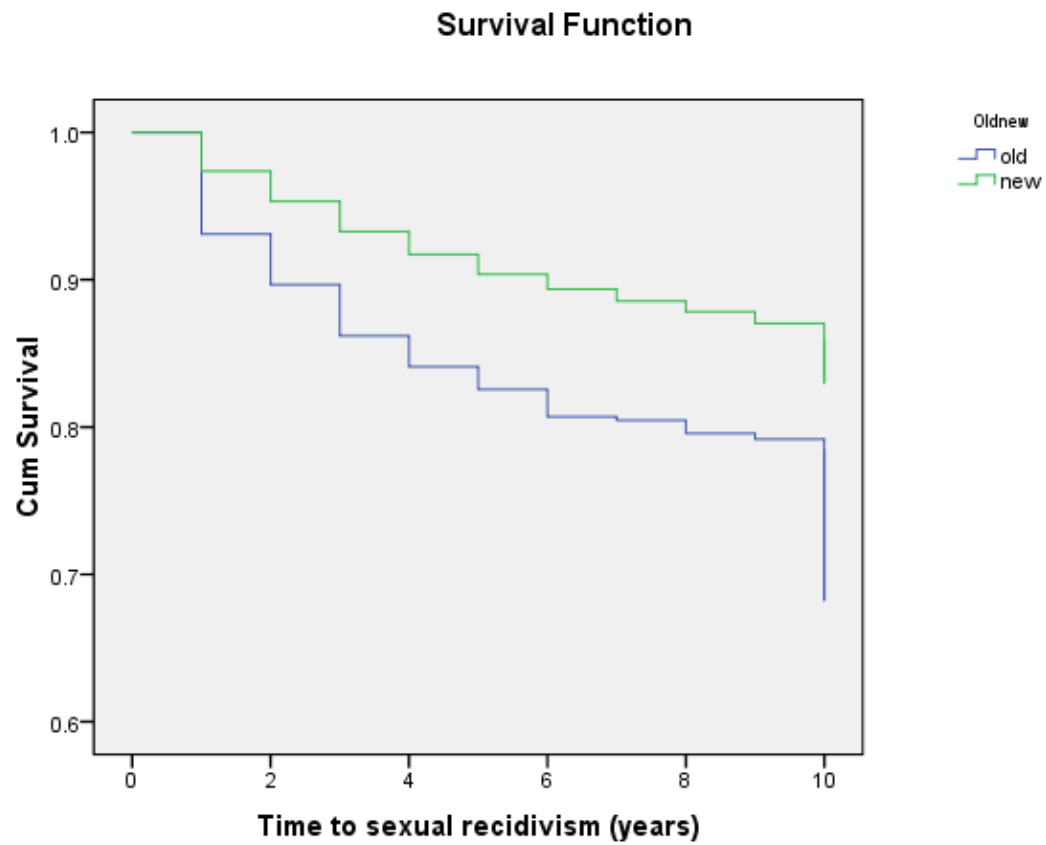


Are Recidivism Rates Declining?

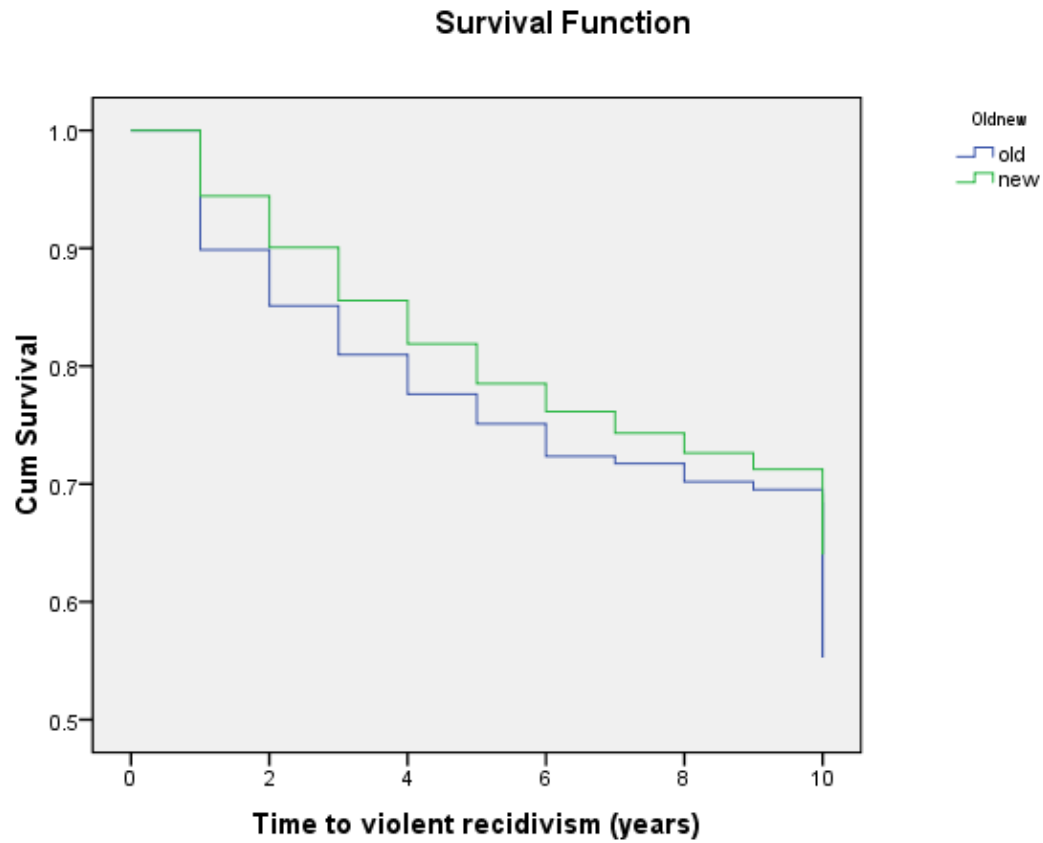
Another approach

- Survival Analysis: Overall comparison of original versus 2008
 - Sexual Recidivism
 - Original norms: Static-99 $M = 3.03$, $n = 1,086$
 - 2008 data: Static-99 $M = 3.06$, $n = 6,406$
 - Overall survival curves significantly different, Wilcoxon (Gehan) Statistic = 66.5 ($df = 1$), $p < .001$
 - Violent Recidivism
 - Original norms: Static-99 $M = 3.03$, $n = 1,086$
 - 2008 data: Static-99 $M = 3.04$, $n = 6,098$
 - Overall survival curves significantly different, Wilcoxon (Gehan) Statistic = 11.1 ($df = 1$), $p = .001$

Are Recidivism Rates Declining? Overall Survival (Sexual Recidivism)



Are Recidivism Rates Declining? Overall Survival (Violent Recidivism)



Are Recidivism Rates Declining? Another Approach

- 2008 data: Logistic Regression for year of release
 - After controlling for Static-99 scores, recidivism rates significantly decline for more recent releases:
 - 5 year sexual recidivism ($\text{Exp}(B) = .965$, $n = 3,664$)
 - 10 year sexual recidivism ($\text{Exp}(B) = .937$, $n = 1,251$)
 - 5 year violent recidivism overall ($\text{Exp}(B) = .967$, $n = 3,470$)
 - Also for child molesters ($\text{Exp}(B) = .953$, $n = 1,317$)
 - Trend for rapists ($\text{Exp}(B) = .970$, $p = .084$, $n = 949$)
 - 10 year violent recidivism ($\text{Exp}(B) = .941$, $n = 1,262$)

Are Recidivism Rates Declining? Another Approach

- Cox Regression: Sexual Recidivism
 - Significant effect for original versus 2008 data
 - rate ratios: average recidivism rate of 2008 data approx. 2/3 of original, $\text{Exp}(B) = .656$, $n = 7,492$
 - When control for Static-99 scores, effect gets slightly larger
 - $\text{Exp}(B) = .592$, $n = 7,492$

Are Recidivism Rates Declining? Another Approach

- Cox Regression: Violent Recidivism
 - Significant effect for original versus 2008 data (though smaller than for sexual)
 - $\text{Exp}(B) = .872, n = 7,184$
 - When control for Static-99 scores, effect gets slightly larger
 - $\text{Exp}(B) = .828, n = 7,184$
 - When control for Static-99 AND rapist/child molester, effect of original versus 2008 increases
 - $\text{Exp}(B) = .728, n = 5,192$
 - Rapist/child molester suppressing differences between original and 2008 findings

Are Recidivism Rates Declining?

Summary

- Sexual Recidivism
 - Significant differences in both low power and high power tests
 - Differences meaningful
 - e.g., survival analysis, scores of 6+
 - 39% versus 26% at five years
 - 45% versus 35% at 10 years

Are Recidivism Rates Declining?

Summary

- Violent Recidivism
 - Appear similar
 - Low power tests: no differences
 - High power tests: significant differences
- Conclusion: Violent recidivism lower in 2008 samples, but suppressed by increased proportion of rapists

Are New Norms Needed for Static-99??

- Yes
- Sexual and violent recidivism have declined since original norms were developed
- Newer norms should be used

NEXT: What about moderators? Are separate recidivism tables needed?

Moderators: Using Cox Regression

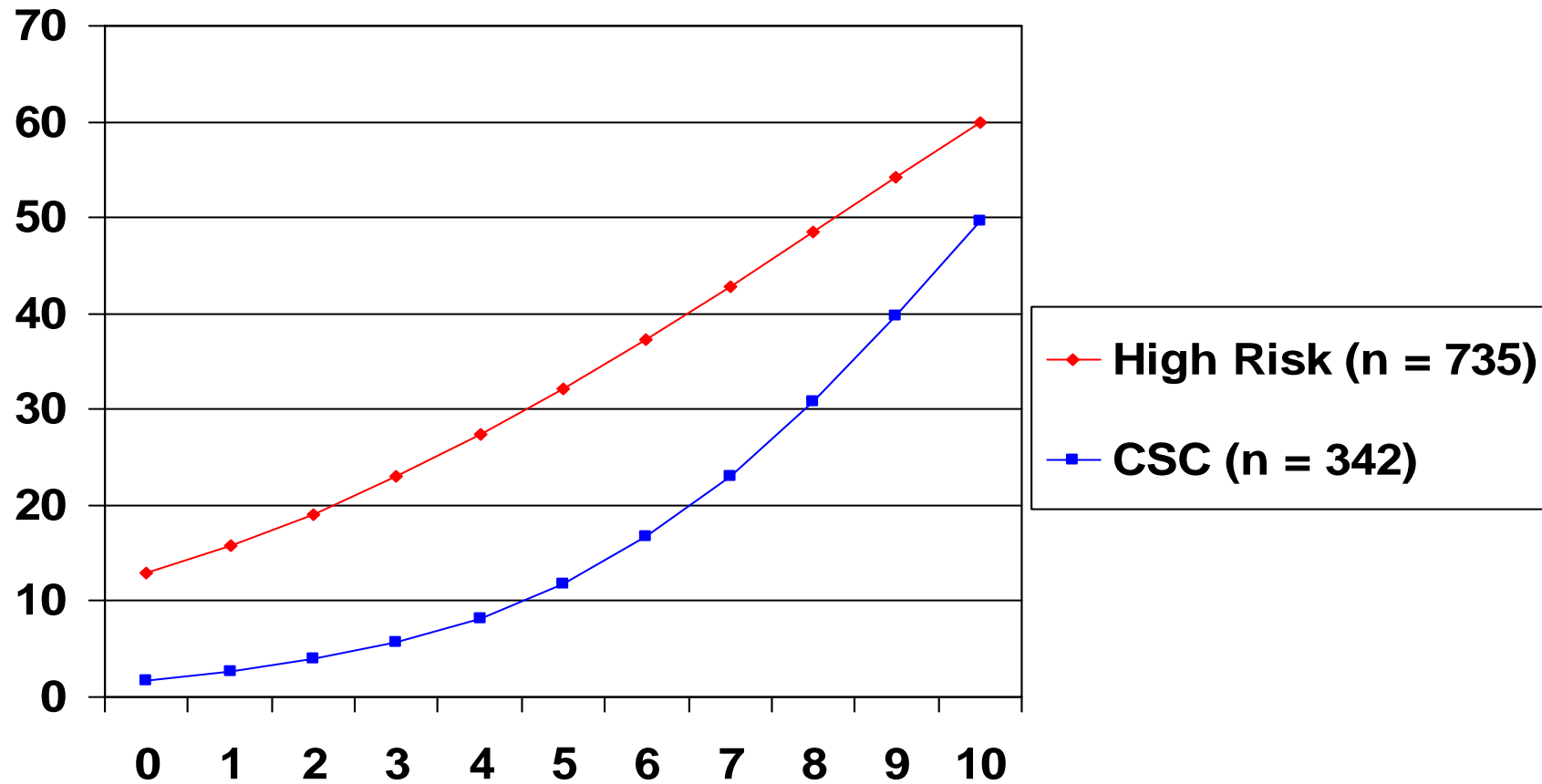
- Sample Type
 - Pre-selected high risk
 - Bridgewater, Denmark Psychiatric, CSC Detained, Dutch Psychiatric, Penetanguishene, Canada NFS/DO/Detained
 - Routine CSC
 - Dynamic Supervision Project federal cases, B.C., Quebec, Warkworth, National Sexual Offender Treatment Program
- Rapist/Child molester
- Insufficient cases to look at treatment variables
- Have not yet looked at jurisdiction

Moderators: Sexual Recidivism

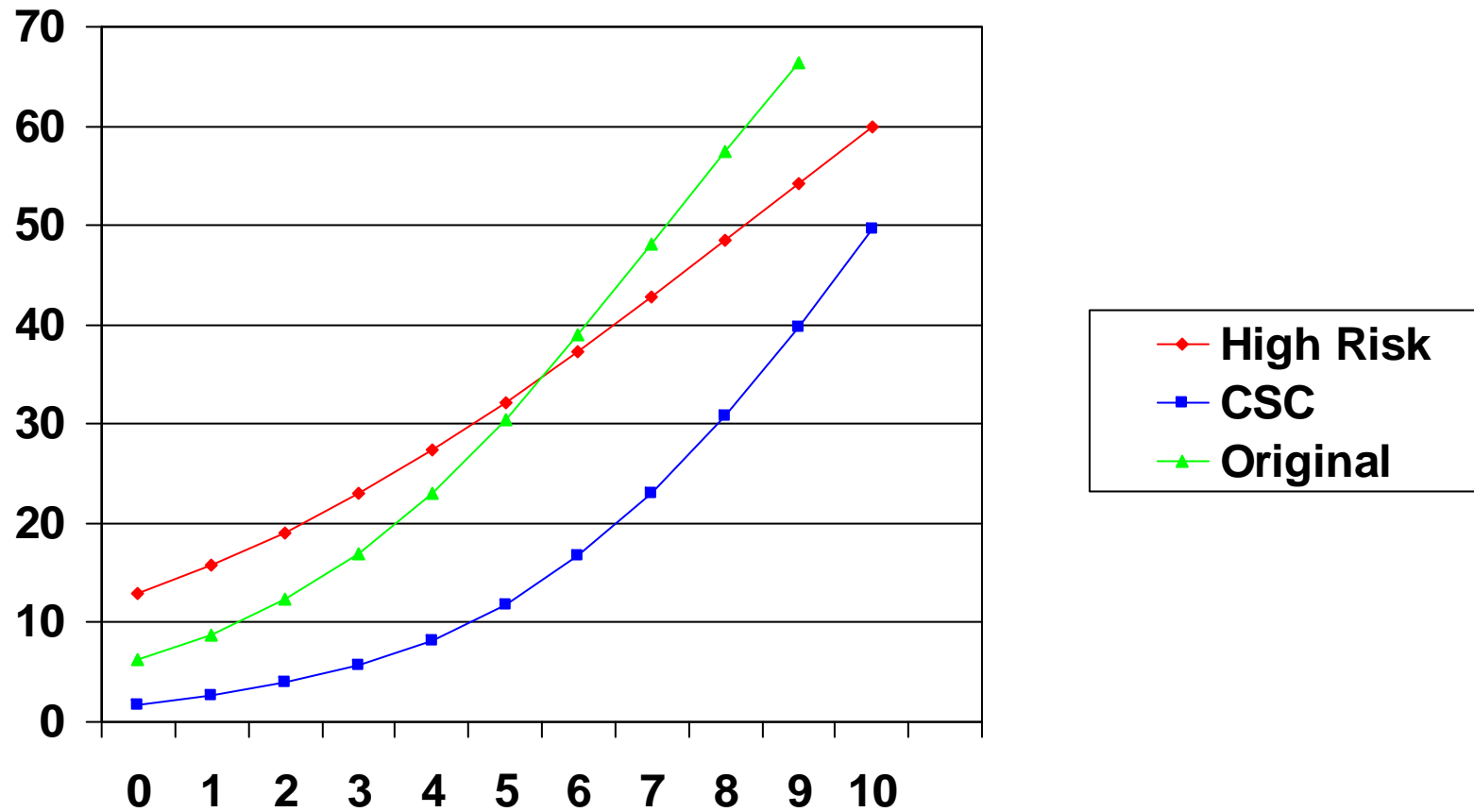
Cox Regression

- After controlling for Static-99, pre-selected high risk samples ($n = 1,273$) showed higher sexual recidivism rates than routine CSC samples ($n = 1,249$), $\text{Exp}(B) = 2.414$
- Possible interaction between Static-99 score and high risk/routine CSC distinction
 - Possible that Static-99 predicts better in routine CSC samples (high risk groups are showing high recidivism rates in low risk categories)
- Separate tables NOT needed for rapists/child molesters

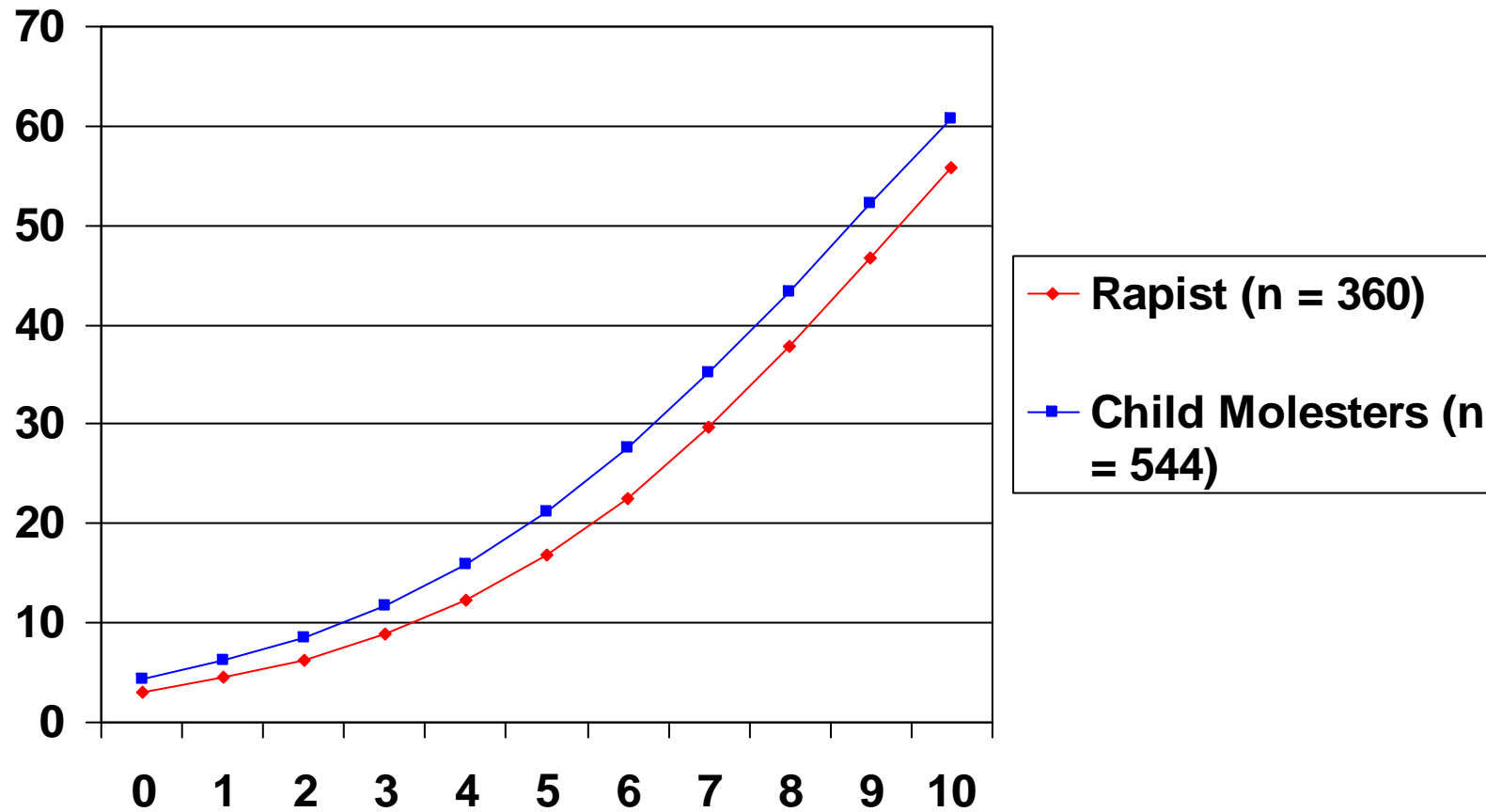
10 Year Sexual Recidivism Rates (from logistic regression estimates)



10 Year Sexual Recidivism Rates (from logistic regression estimates)



10 Year Sexual Recidivism Rates (from logistic regression estimates)

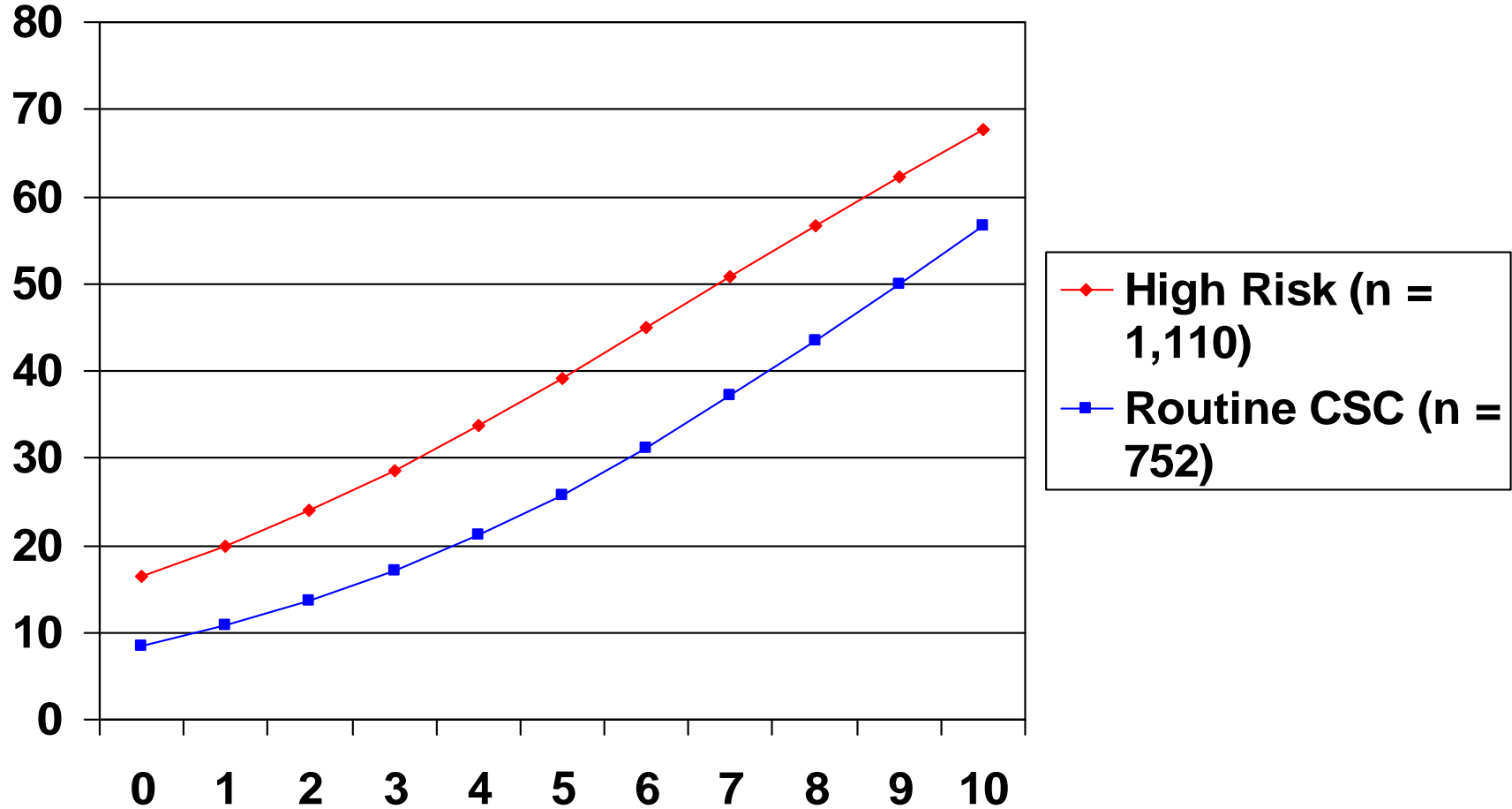


Moderators: Violent Recidivism

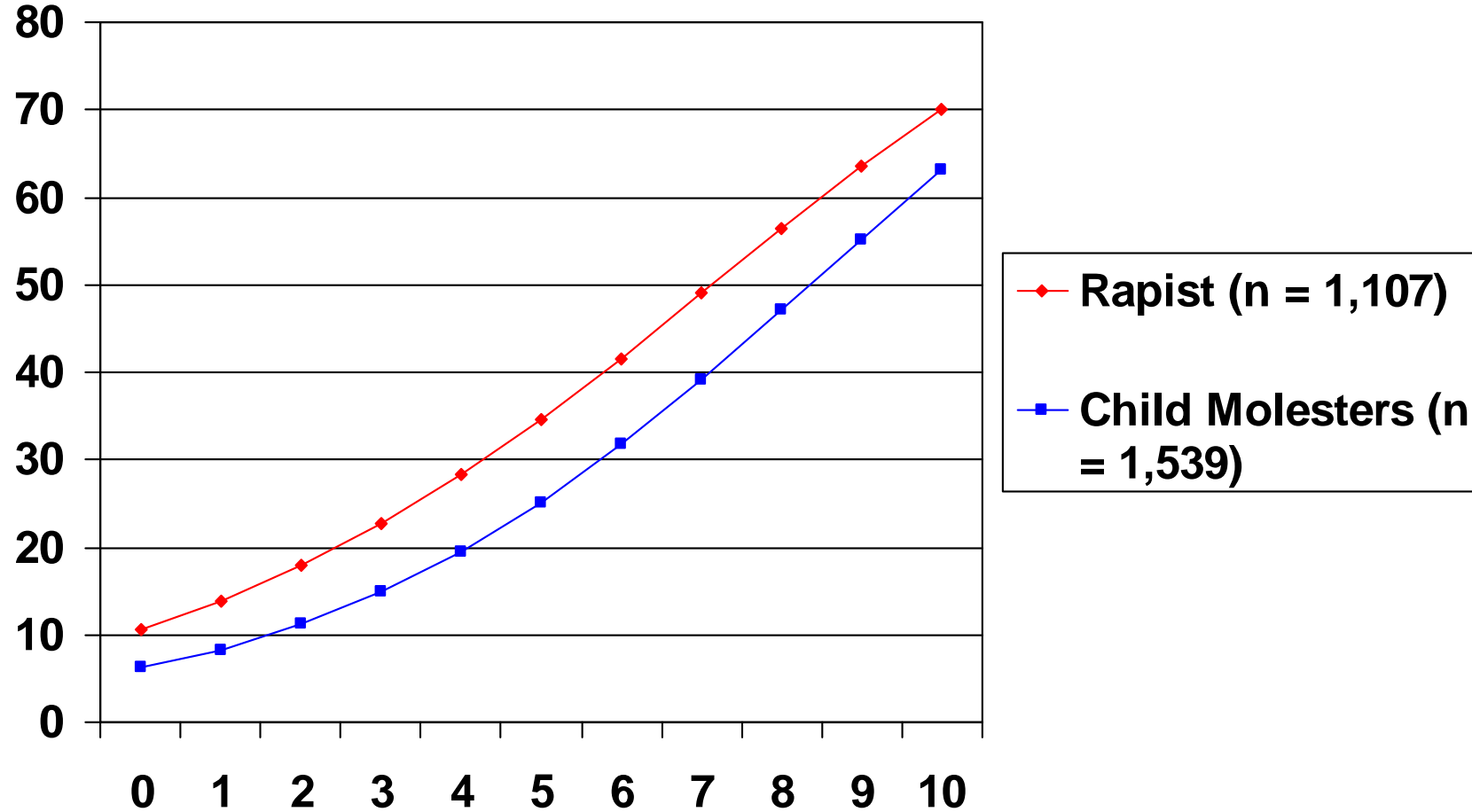
Cox Regression

- After controlling for Static-99:
 - Pre-Selected High Risk samples ($n = 1,241$) showed higher violent recidivism rates than routine CSC samples ($n = 1,249$), $\text{Exp}(B) = 1.858$
 - Child molesters ($n = 2,507$) showed lower violent recidivism rates than rapists ($n = 1,749$), $\text{Exp}(B) = .618$
 - Interaction between rapist/child molester and high-risk/CSC ($N = 1,309$, $p = .002$)
 - CSC/pre-selected high risk distinction matters less for rapists

5 Year Violent Recidivism Rates (from logistic regression estimates)



5 Year Violent Recidivism Rates (from logistic regression estimates)



This project is exciting. Is it too late to contribute my data for this research??

Not at all!

If you have any Static-99 data that you are willing to consider sharing for this important project, or if you would like further information about this project, please contact:

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613-998-0312

Note: This research is not yet complete!!!

Wouldn't it be nice if there was a website where I could obtain the new recidivism norms once they become available??

Now there is! For updates, please check:

www.static99.org